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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Thomas Daniel

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MARSHALL, GERSTEIN & BORUN LLP
233 SOUTH WACKER DRIVE
6300 SEARS TOWER
CHICAGO, IL 60606-6357

EXAMINER

BERNSHTEYN, MICHAEL

ART UNIT

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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,292	Applicant(s) DANIEL ET AL.	
	Examiner MICHAEL M. BERNSHTEYN	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action follows a response filed on February 25, 2009. No claims have been amended, cancelled or added.
2. Based upon the decision on appeal made by the Board of Patent Appeals and Interferences dated on February 25, 2005, the rejection of claims 1-5 and 8-10 under 35 U.S.C. § 102(b) has been withdrawn, and the prosecution has been opened.
3. Claims 1-10 are pending.

Claim Rejections - 35 USC § 103

4. The text of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.
5. Claims 1-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable as obvious over Tsubakimoto et al. (U.S. Patent 4,286,082).

With regard to the limitations of claims 1-4 and 8-9, Tsubakimoto discloses an absorbent resin composition obtained by copolymerizing in an aqueous solution a mixture of 100 parts by weight of an acrylate salt monomer (B) composed of 0 to 50 mol % of acrylic acid and 50 to 100 mol % of an alkali metal acrylate and 0.001 to 5 part by weight of a crosslinkable monomer (C) having 2 to 4 groups selected from the group consisting of $\text{CH}_2=\text{CHCO}-$, $\text{CH}_2=\text{C}(\text{CH}_3)\text{CO}-$ and $\text{CH}_2=\text{CH}-\text{CH}_2-$ in the molecule in the presence of at least one surface-active agent (A) (abstract).

Tsubakimoto discloses that the **acrylate salt monomer** (B) is composed of 0 to 50 mol % of acrylic acid and 50 to 100 mol % of an **alkali metal acrylate**. If the

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proportion of the alkali metal acrylate is less than 50 mol %, the resulting gel-like hydrous polymer is highly sticky and poorly releasable from the polymerization vessel, thus making its handling difficult at the time of cutting or shaping by an extruder, for example. That's why in the acrylate salt monomer (B) the proportion of the alkali metal acrylate may be **100 mol %** (col. 3, lines 20-30). If desired, part of the acrylic acid may be replaced with other water-soluble polymerizable carboxylic acid such as methacrylic acid (col. 3, lines 43-45).

Tsubakimoto discloses that examples of the alkali metal are those widely used, such as lithium, **sodium** or potassium. Sodium, in particular, is preferred in safety, in view of the fact that **sodium polyacrylate** is accepted as a food additive in Japan (col. 3, lines 46-50).

With regard to the limitations of claim 1, Tsubakimoto does not disclose that the alkali metal acrylate other than that formed by neutralizing acrylic acid to raise the proportion of alkali metal acrylate to 100% is formed in that manner.

However, because Tsubakimoto does not limit the form in which the sodium acrylate originates, Tsubakimoto would have led one of ordinary skill in the art, through no more than ordinary creativity, to use sodium acrylate in any form known to be suitable for forming the aqueous sodium acrylate solution. *See KSR Int'l. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (In making an obviousness determination one "can take account of the inferences and creative steps that a person of ordinary skill in the art would employ"). One such form is solid sodium acrylate which, the Appellants acknowledge, was described in the literature and is very readily soluble in water (Spec.

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2:14- 15, 40). Hence, the use of solid sodium acrylate as the source of the sodium acrylate in Tsubakimoto's process would have been *prima facie* obvious to one of ordinary skill in the art (see the decision of the Board of Patent Appeals (page 8, 1st paragraph).

With regard to limitation of instant claim 5, Tsubakimoto discloses that the **crosslinkable monomer (C)** is having in one molecule 2 to 4 groups selected from the group consisting of $\text{CH}_2=\text{CHCO}-$, $\text{CH}_2=\text{C}(\text{CH}_3)\text{CO}-$ and $\text{CH}_2-\text{CH}-\text{CH}_2-$. Preferred as such crosslinkable monomer (C) is at least one member selected from the group consisting of **diacrylates** and **dimethacrylates** of ethylene glycol, **triacylates** and **tridimethacrylates** of trimethylolpropane, etc. Of these compounds, **N,N'-methylenebisacrylamide** or **trimethylolpropane triacrylate** is particularly preferred (col. 3, lines 51-66). The amount of the crosslinkable monomer (C) is **0.001 to 5 parts** by weight per 100 parts by weight of the acrylate salt monomer (B).

With regard to limitation of instant claims 6 and 7, Tsubakimoto does not disclose that aqueous monomer solution is prepared using solid anhydrous sodium acrylate and solid sodium acrylate has water content from 0.1% to 10% by weight. Claims 6 and 7 are drawn to the process although they contain the limitations of the product made by a specific process. Therefore, thus part is directed to a **product by process**, and it is believed that the product, i.e. sodium acrylate of Tsubakimoto is substantially the same as the sodium acrylate recited in claims 6 and 7, even though obtained by a different process, consult *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

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With regard to limitation of instant claim 10, Tsubakimoto discloses that in Example 3 the absorbent resin composition was prepared by the same procedure as in Example 1 (where **sodium acrylate** was used) except that an acrylate salt monomer (B) consisting of **potassium acrylate** was used (col. 8, lines 51-54 and Table 1, col. 11 and 12).

The initiator used in the aqueous-solution polymerization may be an ordinary water-soluble radical polymerization initiator. For example, ammonium persulfate, potassium persulfate, and **hydrogen persulfate** can be cited. There are also usable redox type initiators consisting of said initiators combined with reducing agents such as sodium hydrogensulfite, **L-ascorbic acid** or ferrous salts (col. 4, lines 63-68 and col. 5, lines 1-2)

Therefore, it is reasonable to believe that the aqueous' monomer solutions for producing a sodium acrylate polymer in view of substantially identical monomer (**sodium acrylate**) and the solvent (water) (compare US'082, page 6, Table and the specification, page 12, tables 1 and 2) being used by both Tsubakimoto and the applicant are substantially identical. Since the USPTO does not have proper equipment to do the analytical test, the burden is now shifted to the applicant to prove otherwise.

Therefore, the instant claims are obvious variants of claims of US Patent 4,286,082, and one skilled in the art would not be able to practice the invention of the instant claims without infringing the invention of US Patent 4,286,082.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael M. Bernshteyn/
Examiner, Art Unit 1796

/M. M. B./
Examiner, Art Unit 1796

/David Wu/
Supervisory Patent Examiner, Art Unit 1796

/Gregory L Mills/
Supervisory Patent Examiner, Art Unit 1700